

```
#include <stdio.h>
```

```
int main() {
```

```
    int n, i, j, temp;
```

```
    int bt[20], p[20], wt[20], tat[20];
```

```
    float avg_wt = 0, avg_tat = 0;
```

```
    printf("Enter total number of processes: ");
```

```
    scanf("%d", &n);
```

```
    printf("Enter burst time for each process:\n");
```

```
    for (i = 0; i < n; i++) {
```

```
        printf("P[%d]: ", i + 1);
```

```
        scanf("%d", &bt[i]);
```

```
        p[i] = i + 1; // Store process number
```

```
    }
```

```
    // Sort processes by burst time (SJF)
```

```
    for (i = 0; i < n - 1; i++) {
```

```
        for (j = i + 1; j < n; j++) {
```

```
            if (bt[i] > bt[j]) {
```

```
                temp = bt[i];
```

```
                bt[i] = bt[j];
```

```
                bt[j] = temp;
```

```
                temp = p[i];
```

```
                p[i] = p[j];
```

```
                p[j] = temp;
```

```
    }  
  }  
}
```

```
wt[0] = 0; // First process has 0 waiting time
```

```
// Calculate waiting time
```

```
for (i = 1; i < n; i++) {  
    wt[i] = 0;  
    for (j = 0; j < i; j++)  
        wt[i] += bt[j];  
}
```

```
// Calculate turnaround time
```

```
for (i = 0; i < n; i++) {  
    tat[i] = bt[i] + wt[i];  
    avg_wt += wt[i];  
    avg_tat += tat[i];  
}
```

```
printf("\nProcess\tBurst Time\tWaiting Time\tTurnaround Time\n");
```

```
for (i = 0; i < n; i++) {  
    printf("P[%d]\t%d\t%d\t%d\n", p[i], bt[i], wt[i], tat[i]);  
}
```

```
avg_wt /= n;
```

```
avg_tat /= n;
```

```
printf("\nAverage Waiting Time = %.2f", avg_wt);  
  
printf("\nAverage Turnaround Time = %.2f\n", avg_tat);  
  
return 0;  
  
}
```

```
Enter total number of processes: 4  
Enter burst time for each process:  
P[1]: 6  
P[2]: 7  
P[3]: 8  
P[4]: 3  
  
Process Burst Time      Waiting Time      Turnaround Time  
P[4]     3              0                3  
P[1]     6              3                9  
P[2]     7              9                16  
P[3]     8              16               24  
  
Average Waiting Time = 7.00  
Average Turnaround Time = 13.00  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```